

PATENT ABSTRACTS OF JAPAN

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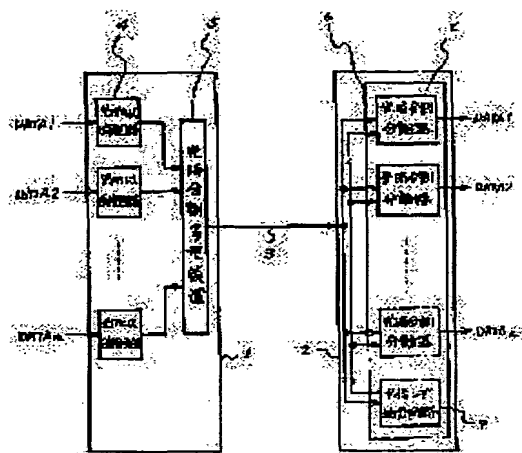
(72)Inventor : ISHII SATOSHI

(54) OPTICAL TIME DIVISION MULTIPLEXING COMMUNICATION METHOD AND DEVICE THEREFOR

(57)Abstract:

PROBLEM TO BE SOLVED: To stably perform phase synchronization of a frequency dividing clock with a specific channel by making the power of a specific optical signal different among plural optical signals to be transmitted from the power of other optical signals.

SOLUTION: An optical pulse transmitting circuit 4 makes the power of an optical signal of a specific channel different to such degrees as to distinguish it from the power of an optical signal of other channels. An optical time division multiplexing circuit 5 performs optical time division multiplexing of an optical signal that is outputted from each circuit 4 and sends it to an optical fiber transmission line 3. Multiple light which is inputted to an optical receiver 2 is branched by a photo-coupler and sent to an optical time division separating circuit 6. A timing extracting circuit 7 generates a frequency dividing clock that is undergone phase synchronization with a specific channel having different power of an optical signal and sends it to each optical time division separator 6. The circuit 6 controls separation timing to synchronize with the frequency dividing clock. With such operations, it is possible to receive an optical pulse signal of a prescribed channel from an optical time division multiple signal.



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(57) 【要約】

【解決手段】本発明の光時分割多重通信方法では、送信する多重光信号のうち特定チャネルの光信号のパワーを他のチャネルの光信号のパワーと異ならせる。また先述通信装置に上記光信号のパワーを制御する回路を設ける。この結果分周クロックを特定チャネルに位相同期させ、分周クロックを容易にかつ安定的に生成することができ

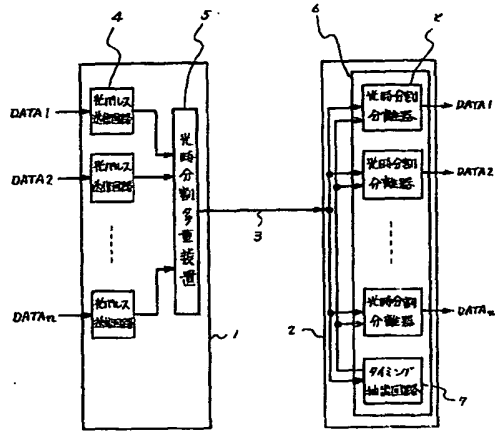


8 (d) のように n 多重光時分割多重信号が生成される。この多重信号は光ファイバ伝送路 3 を通じて光受信装置 2 に入力し、光時分割分離回路 6 において光パルス

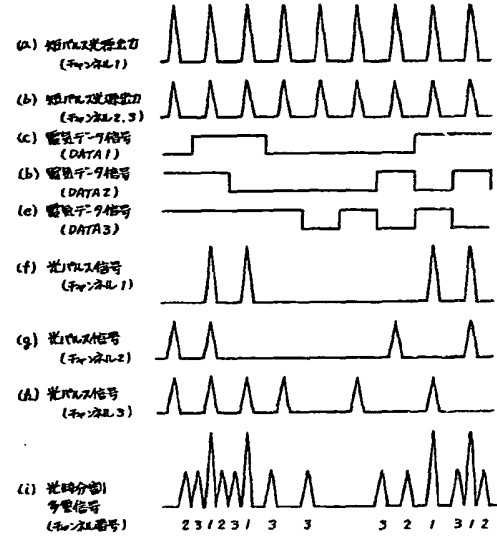
図6(c)は第1チャネルの光時分割分離器8から出力された光信号の例である。

10 光変調器
11 パワー制御回路

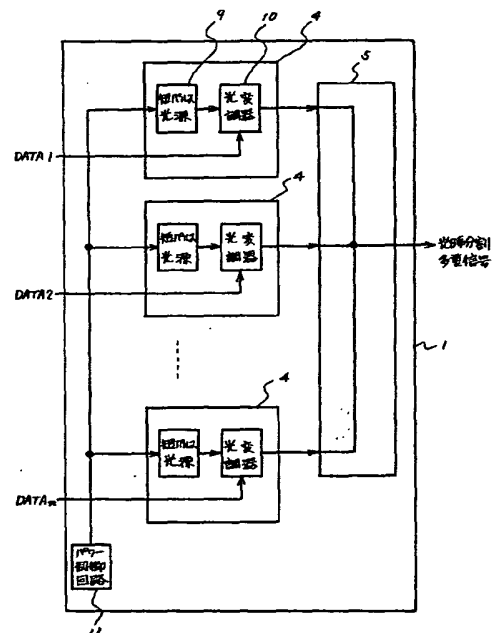
【図1】



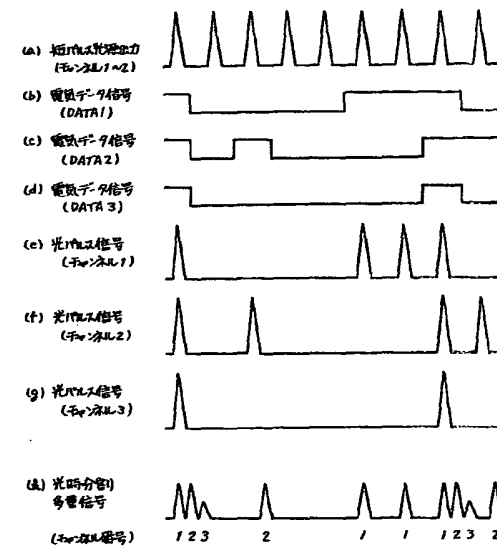
【図3】



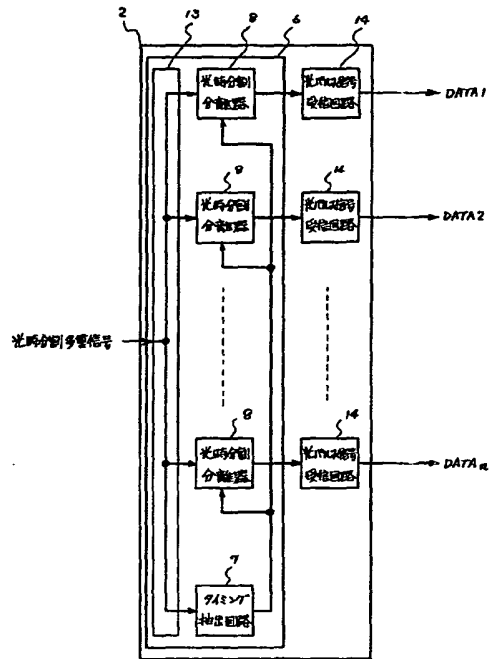
【図2】



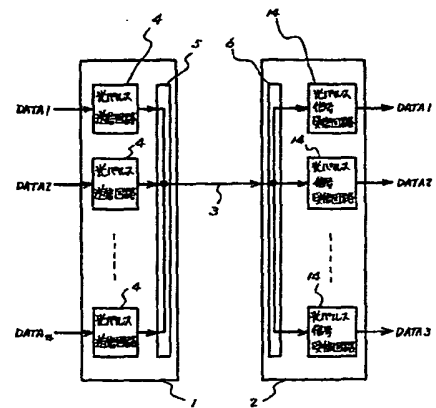
【図4】



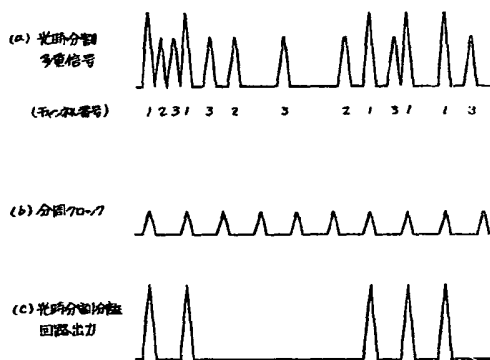
【図5】



【図7】



【図6】



【図8】

